In the hot seat: diabetes
Take steps to prevent the disease from the start

One for the Road
Binge drinking and the risk of liver disease

Music of the Night
When snoring is a danger sign

Rendang Sihat!
Guilt-free rendang
If you are feeling a little overwhelmed from all the festive eating, try this simple, nourishing soup to tame your tummy and reset your system.

**Nutrition value (per serving)**
- Calories: 348 kcal
- Protein: 16g
- Fat: 8g
- Carbohydrates: 11g
- Fibre: 2.4g

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**Method**
1. In a large pot, combine scalded chicken pieces, broth, herbs, and cabbage. Top up the pot with 3 cups of water and bring the mixture to a boil.
2. Once the soup is boiling, reduce the heat and simmer for 20 minutes.
3. Remove the cabbage, slice into 2cm strips and return to the soup. Simmer for another 3 minutes.
4. Add salt and pepper to taste. If desired, add rice wine.
5. Garnish with chopped coriander and serve hot.

**Chicken and ginseng soup**

Preparation time: 40 minutes

Serves 8

**Ingredients**
- 600g Skinless chicken fillet, scalded in boiling water
- 1 litre Fat-free and low-sodium chicken broth
- 20g Ginseng root
- 10 Seedless red dates
- 2 tbsp Wolfberries
- 3 cups Water
- ¼ Whole cabbage
- Optional: 100 ml Rice wine
- ½ cup Freshly chopped coriander
In this instalment of ONEHealth, we take a special look at the Ministry of Health’s ‘war on diabetes’. The disease, which has the potential to wreak havoc with our health, is on the rise and has come under scrutiny. Learn important facts on the impact of the disease and how you can take an active role in battling it in our six-page cover story, **In the hot seat: diabetes**.

Apart from this important health issue, we share with you one of the many milestones at JurongHealth: the launch of our Mobility Park. This outdoor rehabilitative facility, the first of its kind in Singapore, offers a safe and realistic streetscape for patients to regain their confidence in getting around after they are discharged from hospital.

Flip to **WeCare** for a photo story on our integrated kitchen to learn what it takes to prepare and serve healthy, tasty meals to patients. Read also about our Healthcare Humanity Award winner, Senior Enrolled Nurse June Ng, and her passion for nursing and caring for others.

In the second run of **Inside NTFGH & JCH**, we are pleased to share more important health and medical information. This time, we highlight some of the conditions managed by Urology; Gastroenterology & Hepatology; Health & Wellness; Ear, Nose and Throat; and Respiratory Medicine. Learn about kidney stones, alcoholic liver disease, chronic cough, cochlear implants and sleep apnoea.

Turn to **FOODforLIFE!** to educate yourself on how to spot trans fat in the food we eat. We also tackle the sticky question of whether diabetics can eat dessert – and share tips on how to enjoy a little treat now and then without guilt. And if spicy food is your thing, you’ll love our take on traditional rendang, made lower in fat and better for you!

*The editorial team*
The information in this publication is not meant to take the place of healthcare or services you may need. Please see your doctor or primary healthcare provider about any personal health concerns. All information is correct at time of print.

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JurongHealth is a public healthcare cluster that operates Ng Teng Fong General Hospital and Jurong Community Hospital, an integrated healthcare development that serves the community in the west.
HealthBUZZ

With life-sized replicas of a public bus, an MRT train, a taxi and a simulated streetscape, JurongHealth’s new Mobility Park – launched on 7 January 2016 – offers a safe ‘training ground’ to help patients get back on their feet. The park’s goal, said Mr Foo Hee Jug, CEO, JurongHealth, is to help patients reintegrate into the community after discharge from the hospital. He said, “The JurongHealth Mobility Park is another important piece that will transform the way rehabilitation is conducted in a healthcare setting. Going back to the community after discharge from the hospital can be an unnerving experience for some. We want our patients to regain not just their mobility but also their confidence when they return home so that they can ease back into their daily routine.”

Caregivers too benefit, as they can pick up techniques to help and support their loved ones in a safe environment, Mr Foo added. “Caregivers play very important roles in the rehabilitation and recovery process of our patients and we want to also provide caregivers with a life-like environment where they can learn to confidently assist their dependents in manoeuvring barriers and moving around.”

Safe zone
Set in an open 953-square metre garden within the integrated healthcare hub comprising Ng Teng Fong General Hospital (NTFGH) and Jurong Community Hospital (JCH), the mobility park plays an integral role in the community hospital’s holistic post-acute care model.

The park replicates real-life street environments and includes pedestrian crossings, ramps, steps and roadside curbs as well as walkways that are paved over with different surfaces. There is also a sensory garden with herbs and plants that is specially designed for patients on wheelchairs so they can enjoy the outdoors and be close to nature as part of the rehabilitative process.

The most unique feature of the park is its life-sized models of public transportation vehicles, kindly sponsored by SMRT. The MRT train cabin, low-floor bus mock-up and decommissioned taxi simulate real life as closely as possible. These realistic settings offer a safe environment to practise manoeuvring safely and confidently while using walking frames, crutches or wheelchairs. Together, the park’s features provide a comprehensive environment for patients to build confidence while on their road to recovery.
Elderly pedestrians and persons-with-disabilities can learn to identify and use their senior citizen concession card or Green Man+ card on mobility-friendly traffic lights. This gives them up to 13 seconds more to cross the road.

Different walkway surfaces such as pebbles, sand, cobblestones, and even cement with raised wooden strips are simulated so patients and caregivers can learn to manoeuvre around and over them both aided and unaided.

A decommissioned SMRT taxi enables patients to practise getting in and out of a car safely. Patients and caregivers can also learn the proper way to neatly and safely stow a wheelchair.

Patients in wheelchairs or crutches and those with mobility restrictions can try stairs and ramps of varying gradients and learn how to manage them.

A wheelchair-friendly sensory garden is designed to heighten patients’ sensory experience though a variety of herbs and plants.
Preparing 1,600 meals each day to serve the varied nutritional needs of patients is no easy task! Take a look behind the scenes.
Kitchen Favourites

Ever wonder what makes it into the kitchen’s grocery list? These are the most popular items, delivered by our fresh food suppliers.

**Vegetables**
- Cabbage
- Carrot
- Broccoli

**Proteins**
- Chicken
- Fish
- Pork

**Fruit**
- Watermelon
- Honeydew
- Papaya

Each day at dawn, the 2,000-square metre kitchen located in the basement of Ng Teng Fong General Hospital (NTFGH) springs into life to prepare and serve some 1,600 meals to patients at both NTFGH and Jurong Community Hospital (JCH). A dedicated team of 66 – including cooks, servers, hygiene and quality control personnel and administrative staff – keeps kitchen operations running like clockwork.

**Working as a team**

**Kang Pei Ling**, Senior F&B Assistant, keeps an eye on overall operations in a ‘control room’ filled with monitors. “I keep tabs on the food trolley docking system, temperature of the chillers and freezers, the status of equipment under repair as well as plan the duty roster and manage the Electronic Meal Ordering System (EMOS),” she explained. She also ensures that meals for all patients are catered for according to their dietary needs.

Making sure that the kitchen is adequately supplied for these meals is **Fuziah Ismail**, Senior F&B Assistant and Halal Liaison Officer. Whether it is food items, kitchen utensils, equipment or crockery, she is the ‘go to’ person to procure them. Her day begins with delivery checks at the receiving area before moving on to do reports for the day’s meals. “I oversee the assembly of every meal and work in advance to plan the next day’s breakfast.”

**Choo Kok Seng**, Executive Sous Chef. He develops menus, recipes and presentation techniques in consultation with dietitians and speech therapists; conducts safety and sanitation checks; and more. “Everything is done according to a set standard operating procedure to make sure workflows are smooth and food safety standards are adhered to at all times.”

“The most rewarding aspect of the job is knowing that we play a role in maintaining the well-being of patients by providing meals that are high in quality, taste, presentation, texture and freshness. Of course, our favourite part is when patients share positive feedback!”
Every delivery is checked at the receiving area. Fresh items are stored in a chiller until they are needed. To ensure patients get the best, the kitchen sources only fresh, seasonal vegetables and chooses sustainable products wherever possible.

Each day, the total number of meal orders is confirmed before a report is sent to the cooking and dishing team. This ensures that there are enough meals to go around for every patient and that each gets the right meal suitable for their specific dietary needs.

The kitchen has a store of over 1,000 recipes and cooking teams must strictly follow standardised dietitian-approved recipes that are low in fat, salt and sugar, but high in nutrition, variety, taste and texture. Every dish also undergoes routine taste tests as part of the kitchen’s quality control protocol.

The 2,000sqm kitchen is as large as 7.5 tennis courts.
Trolleys of each prepared dish are placed in a blast chiller and rapidly cooled. The food is then stored in a bulk chiller until ready for plating.

The team checks the temperature regularly to ensure that the integrity of the cold chain (below 4°C) is maintained at all times.

Every meal assembly is closely monitored and checked to ensure that it is well presented and complete before the trays are loaded on to the Automated Guided Vehicles (AGVs) and delivered to the wards.

Dishing staff plate each meal in a special cold room. They follow a strict protocol to control the portion of food for each meal and maintain the highest level of cleanliness.

NTFGH is the first hospital kitchen to use a cook-chill method. Meals are prepared in advance and blast chilled to a safe temperature. The food is only warmed and kept warm close to the time it is served so that it maintains its nutritional value and texture. The advance preparation of meals is more efficient and allows flexibility in meeting changing demands. Throughout the cooking, chilling and handling process, the kitchen team ensures food safety is maintained through careful temperature monitoring.
Not only does Senior Enrolled Nurse (SEN) June Ng give of her best to patients while at work, she volunteers for overseas missions as well. ONEHealth speaks to the Healthcare Humanity Award winner to find out what spurs her passion for caring.

With over three decades of nursing, SEN Ng has seen the full spectrum of human suffering, hope, triumph and loss. While these experiences, long working hours and pressures of the job can take their toll, her love for nursing has not abated. Instead, the dedicated nurse is always keen to learn and grow in her professional skills. This led her to move from working in oncology to endoscopy three years ago, where she has since played an important role in setting up and commissioning the new Endoscopy Centre at Ng Teng Fong General Hospital (NTFGH).

Apart from her work in patient care and her duties in overseeing the maintenance of the procedure rooms and equipment to ensure the highest levels of safety and cleanliness, SEN Ng is also an active volunteer for overseas missions.

The Healthcare Humanity Award

The Healthcare Humanity Award is given to outstanding and inspirational healthcare workers. They are role models who go the extra mile to offer care and comfort to the sick and infirm. Award recipients are recognised for their courage, unwavering dedication, selflessness, integrity, compassion and humanity in the course of their work and service to others.

The Award is a legacy of the Severe Acute Respiratory Syndrome, or Sars, epidemic in 2003, when healthcare staff risked their lives to battle the outbreak and care for infected patients.
participant in quality improvement and other nursing-related projects. The Service Quality Award winner goes out of her way to render assistance to patients who need extra attention.

A giving heart
Although the demands of her day-to-day duties can be great, SEN Ng finds her work immensely rewarding. She said, “My greatest satisfaction is to see my patients recover from a procedure and return home safely to their loved ones.”

It gives her joy just to be there for patients, she added. “I enjoy interacting with people. Each day, I feel grateful that I am able to brighten up my patients’ day. It does not take much: offering encouraging words or even simply listening to their concerns.” She also tries her best to offer solace to patients in their dark times. “I try to gently help them look at the big picture of life, and its impermanence and uncertainty. This sometimes helps patients and caregivers to see things in perspective and come to terms with their sorrow.”

The active volunteer extends her help in other ways. She spends her leisure time participating in JurongHealth community outreach and goes on voluntary missions every year. “It is my passion to volunteer,” she said simply, “If you give your time for a good cause or a charity, you have all the energy in the world. The spirituality generates goodness, happiness and joy.” While honoured to receive the award, SEN Ng takes her hat off to her peers in the profession who likewise go the extra mile for those in need.

Giving so much to nursing and others has rewarded her with important lessons in return, she reflected. “Working in healthcare has shown me that life is unpredictable. I continually remind myself to count my blessings, cherish my health, be grateful, and contribute more to those in need.”

“My greatest satisfaction is to see my patients recover from a procedure and return home safely to their loved ones.”
In the hot seat: diabetes

Rising rates and related complications have put diabetes in the limelight and triggered a national effort to stem the tide. Here’s what you need to know about the dangers of the disease and the redoubled efforts to push back.

By Sheralyn Tay

IN CONSULTATION WITH DR KURUMBIAN CHANDRAN, DIRECTOR & SENIOR CONSULTANT, ENDOCRINOLOGY AND OLIVIA TASKER, PODIATRIST
We’ve all heard of diabetes – but what many of us may not know is just how serious and widespread the condition is. Poorly controlled diabetes greatly increases the risk of a host of diseases and medical complications that can affect the whole body. These include nerve damage, blindness, heart and blood vessel diseases, stroke, kidney failure and amputations.

In Singapore, the numbers bear this out. **In 2014, diabetes was present in half of all heart attack cases; two in three new kidney failure cases; and two in five stroke cases.** Additionally, the disease has a profound impact on quality of life, **shortens life expectancy by 12 to 14 years** and imposes a large financial and social burden on families.

Of most concern is the rising incidence of this dangerous disease in Singapore. A recent report by the International Diabetes Federation (IDF) found that among developed nations, **Singapore has the second-highest proportion of diabetics, second only to the United States. In fact, 400,000 or 11.3 per cent of adults in Singapore suffer from the disease.** Alarmingly, about half of those affected are not even aware of their condition. The Saw Swee Hock School of Public Health estimates that if left unchecked, the incidence of diabetes in Singapore could swell to 670,000 by 2030, and nearly 1 million by 2050.

**Sickly sweet danger**

So what is diabetes? The disease is more than a case of eating too much sugar. **Diabetes is a failure of the body to recognise sugar and convert it to energy.** This can happen when the body cannot produce insulin at all or when it becomes resistant to insulin. Insulin is a hormone that tells the body when to use sugar (glucose) or when to store it for the future. In this way, insulin regulates blood sugar levels from getting too high or too low.

**Type 1 diabetes** occurs when the body cannot produce insulin at all. This condition is usually diagnosed in childhood and those with Type 1 diabetes require daily insulin injections for life. This form of diabetes is congenital and cannot be prevented.

**Type 2 diabetes** occurs when cells are insulin-resistant and cannot recognise insulin. This causes them to lose their ability to know when to absorb and use sugars in the blood. This causes cells to starve and glucose to build up in the bloodstream. Excessive amounts of undigested sugars in the bloodstream build up and over time, cause damage to delicate cells and blood vessels across the whole body – particularly those in the nerves, eyes, kidneys and heart. **Type 2 diabetes accounts for 90 per cent of diabetes cases. This form of diabetes typically occurs in adults and is largely due to a mix of genetic factors and preventable lifestyle factors.**
Symptoms and signs

Without the ability to use glucose for fuel, the body will cease to function at its optimal rate, resulting in a range of symptoms.

- **Constant fatigue** can result from the inability to use glucose for fuel. The body resorts to metabolising fat stores, a process that requires more energy.

- **Unexplained weight loss** can occur when the body is unable to process and use the calories in the foods we eat. When the body tries to excrete excess sugar in the blood via the kidneys, dehydration can also happen, leading to more weight loss.

- **Excessive thirst and urination** is a common sign of high blood sugar levels. The kidneys use large amounts of water to excrete extra sugar, causing constant thirst.

- **Excessive eating or hunger** can result when the body tries to secrete more insulin (which stimulates hunger) to try to manage high blood sugar levels.

- **Poor wound healing and increased infections** can arise from high blood sugar levels. Excess glucose in the blood suppresses the functions of antibodies that defend the body against bacteria and clean up dead tissue.

It is important to remember that some of these symptoms only occur in later stages after the onset of the disease. So it is important to be screened regularly for diabetes so it can be detected and treated early.

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**Diabetes risk factors**

**Modifiable risks**

- Excess weight or obesity
- A sedentary lifestyle

**Non-modifiable risks**

- Family history
- Age
- History of gestational diabetes
- Polycystic ovary syndrome
- High blood pressure
- High cholesterol
- Race (in particular those of Asian descent)
The war on diabetes

Given its deadly potential, a national effort is underway to tackle the disease across three major fronts. The Ministry of Health has set up a task force to develop new strategies and enhance existing programmes to boost prevention efforts, raise the take-up rate of screening and improve disease control. **Upstream efforts to raise awareness of the disease and promote a healthy lifestyle is of particular importance because diabetes cannot be cured – it can only be managed.**

One important battlefront is the early detection of diabetes so that steps can be taken to decrease the risk of developing complications or even turn back the clock. Before diabetes becomes full blown, there is a window when one is pre-diabetic. This is when blood sugar is abnormally high, but not yet high enough to be classified as Type 2 diabetes. Without intervention, pre-diabetes may progress to Type 2 diabetes in 10 years or less – after which a reversal becomes impossible. In Singapore, 12 per cent of the population suffer from pre-diabetes; a third of them will develop diabetes. However, weight loss – as little as 5 to 7 per cent – can halve the risk of progression to diabetes. Knowing whether you are pre-diabetic and taking steps to reduce your risk factors is thus critical to prevent the onset of the disease.

Weight-up call

Of all the various risk factors for diabetes, excess weight or obesity is a primary concern. **Research shows that excess fat in the body makes cells become more resistant to insulin.** The incidence of Type 2 diabetes is three to seven times higher in those who are obese than in those who are of normal weight. In fact, treating obesity will treat diabetes. **Weight management is thus the first line of defence in the diabetes war.** A healthy lifestyle is the key to tackling ‘diabesity’ or obesity-dependent diabetes. Two major lifestyle changes to make: raise activity levels and eat better.

**Eat well and at the right times**

Irregular mealtimes, overeating, and a diet of fast and processed food can cause weight gain and increase the risk of diabetes. Eat fresh whole foods that have the right balance of carbohydrates, vegetables and proteins. Carbohydrates and simple sugars have the biggest impact on blood sugar levels. Choose brown rice, wholegrain noodles or wholemeal bread wherever possible because these are digested more slowly, release energy over time and are less likely to cause blood sugar to spike and increase the risk of insulin resistance.

**Move more, move daily**

Being inactive reduces your ability to burn calories and puts you at risk of weight gain. **Physical activity uses up glucose as energy, makes your cells more sensitive to insulin and burns calories to maintain a healthy weight.** It can be as simple as moving a little more each day with a longer walk to your lunch venue or taking the stairs instead of the escalator. Just 30 minutes of activity a day can stave off weight gain and reduce the risk of diabetes.
Managing diabetes is a holistic endeavour. Apart from a healthy diet and weight control, diabetics also have to monitor their general health and the health of their feet. Each day, four lower limb amputations are done due to diabetes-related gangrene. This is because high levels of blood sugar cause damage to blood vessels and nerves, particularly in the legs and feet, explained Olivia Tasker, Podiatrist, JurongHealth. “It is common for diabetics to experience numbness, tingling, weakness or a burning or stinging pain in their lower limbs, especially in the feet. This condition is due to nerve damage or neuropathy.”

“The loss of sensation in the feet means that a diabetic person can injure themselves but not know it. They may also not realise the severity of wounds and delay getting help until the late stages,” Ms Tasker added. More significantly, because many diabetics suffer from poor blood circulation, wound healing is delayed and long-standing wounds can become infected. All this underscores the importance of daily footcare at home.

- **Check, please:** Check feet every day for cuts, signs of infection, red spots, cuts, swelling or blisters. Use a mirror or get someone to inspect the bottom of your feet.
- **No sharp edges:** Trim toe nails regularly to prevent them from cutting into your toes. Always cut toenails straight across – never into the sides – and file the edges well.
- **Cover up:** Wear well-fitted covered shoes to protect the feet from injury. Avoid slippers and open-toed sandals.
- **Tame dry skin:** Keep feet well moisturised. Dry feet well after a bath and apply lotion, making sure it is well absorbed. Avoid the skin between the toes because the skin here is thinner and at risk of splitting.
- **Scrub in the tub:** To prevent calluses, use a pumice stone to gently scrub your feet when you shower. Do not self-treat calluses at home. See a podiatrist to trim thick calluses.

**Skin changes**

Diabetes damages the nerves in your feet. Apart from causing numbness, this affects the skin’s ability to control oil and moisture, so it can become excessively dry, peel and crack. Calluses also build up faster on the feet of people with diabetes especially in areas of the foot that are exposed to prolonged pressure. Thick untrimmed calluses can break down and turn into sores and ulcers. These can increase the risk of chronic wounds and infection. Ms Tasker advises those with diabetes to have their feet and lower limbs checked once a year. Diabetics who suffer from severe numbness in the feet or poor vascular supply should be checked at least once every six months as they are more at risk of developing foot complications.
WILL EATING AND DRINKING TOO MUCH SUGARY STUFF CAUSE DIABETES?
Consuming too much of anything, including sugary food and drink, will likely lead to obesity, a major cause for insulin resistance. Excessive consumption of sugar puts the pancreas under tremendous stress to produce enough insulin to match the spikes in blood sugar levels. Over time, this may increase the risk of insulin resistance and thus, Type 2 diabetes.

DIABETES IS KNOWN AS 糖尿病 IN CHINESE OR ‘SUGAR URINE DISEASE’. DOES DIABETES REALLY RESULT IN SUGAR IN THE URINE?
In healthy people, the kidney is able to absorb all of the sugar that it filters from the blood. In patients with previously undiagnosed or poorly-controlled diabetes, the high sugar load in the filtered blood means the kidney is not able to absorb all of the sugar. As a result, large amounts of sugar are passed out in the urine. Sugar in the urine increases the risk of fungal infection of the external genitalia (e.g. thrush) and urinary tract infections. It also leads to the passing of large amounts of urine and consequently, dehydration.

WHY ARE SOME DIABETIC CASES TREATED BY GP’S AND POLYCLINICS, WHILE OTHERS ARE TREATED BY SPECIALISTS AT HOSPITAL OUTPATIENT CLINICS?
In most cases, the condition can be managed by primary care doctors, but patients with complications from advanced diabetes or pregnant women with diabetes will require diabetes specialists to provide guidance.

The right-siting of care is important, including for diabetes patients. As part of JurongHealth’s diabetes integrated care pathway, the team is working on a new initiative to identify a primary care doctor for each and every one of our patients in our diabetes clinic. We believe that a primary care doctor can provide supportive, holistic and affordable care to our patients with this chronic disease. We believe in shared care between the specialist and the primary care doctor for patients with complex medical needs.
In our second instalment of Inside NTFGH&JCH, we take a look at more of the different specialties and allied health services available at JurongHealth. This issue looks at the conditions managed by our Urology, Gastroenterology & Hepatology, Health & Wellness, Ear, Nose & Throat and Respiratory Medicine specialties.
Urology
The Urology service offers a comprehensive range of adult urologic services, including advanced diagnostic, medical and surgical care for both men and women. We provide individualised care for general urological conditions, urologic cancers as well as urinary tract infections. One of the most common conditions we treat is kidney stones. Learn to spot the signs and reduce your risk in ‘Set in Stone’ on page 20.

Gastroenterology & Hepatology
Whether they are conditions affecting the digestive tract or liver, the Gastroenterology & Hepatology service manages them all. Conditions we treat include acute and chronic viral hepatitis, peptic ulcers, acid reflux and inflammatory bowel disease. Read ‘One for the Road’, on page 24 to learn about – and avoid – alcoholic liver disease.

Health & Wellness
The Health & Wellness service covers a wide range of medical services from health screenings and vaccinations to consultations and medical examinations. We aim to empower patients with the knowledge and skills to lead a healthy lifestyle and to drive prevention of illness through early detection, diagnosis and treatment. Turn to ‘No Coughing Matter’ on page 28 on how to deal with a common but problematic condition: chronic cough.

Ear, Nose & Throat (ENT)
Otolaryngology, better known as Ear, Nose & Throat, is a specialised area of medicine that deals with diseases of the ear, nose, throat, head and neck regions. In ‘Hear for a Sound Life’ on page 31, we focus on the ‘ear’ part of the specialty – and how medical science and technology come together to bring hearing back.

Respiratory Medicine
Dealing with all manner of breathing issues, the Respiratory Medicine service manages ailments such as asthma and breathlessness as well as lung diseases. Our specialty also runs a sleep lab that studies and manages conditions such as sleep apnoea. In Music of the Night on page 34, learn how to tell if you or a loved one suffers from this potentially serious problem.

Read future issues of ONEHealth to learn more about our clinical specialties and allied health services.
Kidney or urinary stones form when the body’s chemical balance is off-kilter. According to Dr Wijewardena Duminda Anuradha, Resident Physician, Urology, JurongHealth, “These stones form when minerals in the urine separate and crystallise. Normally, the urine contains chemicals that prevent these crystals from forming. When these inhibitors do not work, stones may form.” An excess of crystal-forming minerals or salts such as calcium, oxalate and uric acid in the body and the lack of fluid can also increase the risk of stones in people who are susceptible or who have already suffered an episode of urinary stones.

Other risk factors include:
- Family or personal history
- Dehydration
- Diets high in animal protein, salt and sugar
- Urinary infections or urinary tract obstruction
- Obesity
- Metabolic diseases such as hyperthyroidism, gout, renal tubular acidosis and cystic renal disease
- Digestive diseases and gastric surgery
- Certain medications and supplements
The minerals within us

Kidney stones are made of various combinations of chemicals and are categorised as **calcium-containing stones** (a common form) and **non-calcium containing**. Depending on their mineral make-up, the appearance and hardness of urinary stones vary.

- **Calcium stones** are formed due to an excess of a mineral called oxalate – commonly found in some fruit, vegetables, nuts and chocolate.
- **A struvite stone** is less common and caused by infection in the urinary tract. It can grow quickly and become quite large.
- **Uric acid stones** form due to chronic dehydration. The risk increases in those with gout, a genetic tendency or a diet too high in protein.
- **Cystine stones** form in people with an inherited disorder that causes the kidneys to excrete an excess of certain amino acids.
- **Xanthine stones** are caused by an enzyme deficiency that causes the build-up of xanthine deposits.
- **Silica stones** are rare and caused by certain medications or herbal supplements.

**Kidney or urinary stones are formed** when minerals in the urine separate and crystallise due to a chemical imbalance. Because they often occur in the kidneys and urinary system, they are called kidney or urinary stones.
Mysterious pain
Kidney stones typically form in the tracts within the kidney or urinary system. The condition is very common and is three times more likely to affect men than women, Dr Anuradha explained. Very small crystals may travel through the urinary tract and pass out of the body in the urine without being noticed, so most of the time, many people are unaware that they have a kidney stone. But when it moves around within the kidney or passes into the ureter (the tube connecting the kidney and bladder), painful symptoms may appear on the side or back of the body or below the rib cage. This pain may move to the lower abdomen and groin. In some cases, the pain may come in waves and fluctuate in intensity. There may be nausea and vomiting, pain when urinating or a change in urinating frequency and volume. The urine may also be discoloured, cloudy or foul-smelling. “Some may feel a ‘blocked’ sensation while passing urine,” Dr Anuradha said. “Seek immediate medical attention if you experience pain so severe that you can’t sit still or find a comfortable position; if the pain is accompanied by nausea, vomiting, fever and chills; if you persistently find blood in your urine; or have difficulty passing urine.”

Stone begone
“The treatment of urinary stones can be non-surgical or surgical,” Dr Anuradha said. Non-surgical management typically involves medication that will help small stones pass out in the urine. The patient will need to also drink about 2 to 3 litres of water a day to increase urine output to ‘flush’ out the stone.

A kidney stone may not cause symptoms until it moves around within the kidney or passes into the ureter. This can result in:

- Severe pain below the ribs in the side and back
- Pain that travels to the lower abdomen and groin
- Pain that comes in waves and fluctuates in intensity
- Pain when urinating
- Urine that is coloured pink, red or brown, is cloudy or foul-smelling
- Nausea and/or vomiting
- Changes in urination frequency and volume
- Seek emergency treatment if the pain is severe, and if there are fever or chills, vomiting or blood in the urine.
For larger stones, a procedure called extracorporeal shock wave lithotripsy may be used. Sound is used to create ‘shock waves’ that break stones into tiny pieces that can be passed out in the urine. The procedure is done under sedation or light anaesthesia.

“Surgery may be needed to remove a kidney stone if it does not pass after a reasonable period of time; causes constant pain; is too large to pass on its own; or is caught in a difficult place,” Dr Anuradha went on to elaborate. “Minimally invasive surgery is also indicated if the stone blocks the flow of urine; causes an ongoing urinary tract infection; damages kidney tissue; causes constant bleeding; or if it has grown larger.” In this procedure, the stone is reached via the urethra with a long scope equipped with a video camera and a device that fragments the stone before it is removed. For larger stones, a small incision will be made at the back (or loin) so that a larger scope can be inserted into the kidney.

After surgery, the stones are analysed for their chemical composition so that medication, lifestyle or diet changes can be recommended to prevent a recurrence. Prevention methods include ensuring sufficient daily hydration (about 2.5 litres of water or enough for urine to be light and clear) as well as a diet low in salt, animal protein and oxalate-rich foods (such as nuts, tea, chocolate and soy products). It is also important to maintain a diet high in calcium but to use calcium supplements with caution. “Urinary stones tend to recur 50 per cent of the time, so it is important to prevent them in the first place or take care after the first episode,” said Dr Anuradha.
ONE FOR THE ROAD

The occasional glass of wine or pint of beer is generally harmless, but excessive consumption can lead to severe liver damage

By Adam Koh

In consultation with Dr Kenneth Koo, Consultant, Gastroenterology & Hepatology and Dr Irene Tirtajana, Associate Consultant, Psychiatry
Toxic overload
In most people, a little alcohol consumption poses no problem. This is because the liver, the body’s ‘chemical plant,’ contains special enzymes to break down and neutralise alcohol. Dr Kenneth Koo, Director and Consultant, Gastroenterology & Hepatology, JurongHealth, explained, “The liver processes alcohol and breaks it down to acetaldehyde.” Excessive alcohol intake means more acetaldehyde is formed. This potentially toxic compound is responsible for many of the side effects of alcohol such as nausea, headaches and flushing. “Prolonged exposure to acetaldehyde is thought to play a role in the development of alcoholic liver disease, among various other mechanisms,” he added.

This is why long-term alcohol abuse can result in alcoholic liver disease, a spectrum of liver injuries that can range from a relatively mild disease such as fatty liver, to more severe forms of liver inflammation such as alcoholic hepatitis. Alcohol abuse can also lead to the formation of permanent scar tissue in the liver or liver cirrhosis.

Fatty liver occurs when fat accumulates within the liver cells, enlarging and damaging them. If left untreated, fatty liver disease progresses to cirrhosis. This is where liver cells are replaced with fibrous scar tissue. The build-up of scar tissue impairs the functioning of the liver, causing bodily processes to deteriorate. When the liver fails, the body loses its ability to produce essential bio-chemicals, store nutrients, detoxify metabolic waste, clot blood and regulate glucose.

Cirrhosis can cause bleeding, retention of fluids, mental confusion, and in some cases, progress to cancer. Apart from liver disease, alcohol abuse can also lead to a myriad of other health problems such as damage to the pancreas, numbness in the hands and feet and heart problems.

One drink too many
While not everyone who drinks alcohol will develop liver disease, alcohol abuse is the most significant risk factor, Dr Koo said. “The risk of cirrhosis increases for men who drink more than 60g to 80g of alcohol a day for more than 10 years. For women, the risk increases for those who consume more than 20g a day.” The type of alcohol may also influence the risk of developing alcoholic liver disease, he added. He pointed to a study in Denmark that revealed that drinking beer or spirits was more likely to be associated with liver disease than wine drinking.

Having five or more drinks at one sitting for men, or four or...
more drinks for women – has been shown to increase the risk of alcoholic liver disease. Women are also at higher risk of alcoholic liver disease than men. Other risk factors are smoking, obesity and the existence of liver disease such as chronic viral hepatitis.

**Medical help and management**

Seek help early if you suspect that you or a loved one have a drinking problem and are at risk of alcoholic liver disease. The condition can be diagnosed through a combination of a thorough patient history, physical examination, blood investigations and an ultrasound scan of the liver.

“Once diagnosed, treatment requires a holistic approach involving many healthcare professionals,” said Dr Koo. “The mainstay of treatment is complete alcohol abstinence. Often this involves healthcare professionals trained in addiction medicine. Nutritional support is also important as many patients with drinking problems are malnourished and this is associated with a poorer outcome.”

The good news is that for people in the early stages of fatty liver disease, abstaining from alcohol for four to six weeks can reverse the condition. Late-stage disease may require more sustained management such as lifestyle changes, total abstinence and medication. Advanced liver cirrhosis may require a liver transplant for long-term survival.

**TIPS FOR STAYING ON THE WAGON**

- **Get rid of temptation**
  - Remove all alcohol and related paraphernalia from your home and office
- **Tell your friends, family members and co-workers**
  - Inform others you’re trying to stop drinking.
  - If they drink, ask them to support your recovery by not doing so in front of you
- **Be honest and upfront about your new limits**
  - For example, let guests know that drinking is not allowed in your home and that you may not be able to attend social events where alcohol is served
- **Find social support**
  - Join a support group or talk to people who have successfully quit or cut back on drinking

**Quit for good!**

Regular alcohol consumption may result in dependence. Some signs include craving; the need to drink increasing amounts in order to achieve the same effect; and anxiety, sweating, nausea or shaking when abstaining from alcohol. If there are signs of a physical dependence on alcohol, it is safer to quit under medical supervision. If you wish to quit, these are some important steps to take.

**Determine your goals:** Ask yourself if you wish to stop drinking altogether or just cut back. For instance, decide your drinks limit per day and commit to two or more ‘dry’ days per week. Cutting down on your alcohol intake can set the stage for abstinence.

**Set your milestones:** Decide when your plan to stop or limit drinking starts. If you’re trying to stop drinking, set a specific quit date.

**Celebrate your victories:** For every goal reached (e.g. a period of total abstinence reached), give yourself a pat on the back for staying on your journey of recovery.
Seek Help! If you experience noticeable withdrawal symptoms in the process of cutting down on alcohol, seek medical advice/supervision. Consult a doctor or seek emergency treatment if you experience severe tremors, vomiting, fever, seizures, confusion, visual/auditory hallucinations or paranoia.

Putting down the glass

The point at which social drinking becomes a prelude to alcohol abuse can be a fine one; not many people readily accept they have a problem. Answering ‘yes’ to two or more of these questions indicates a possible alcohol problem and professional help is recommended.

- Have you ever felt you should cut down on your drinking?
- Have you ever been annoyed when people criticise your drinking?
- Have you ever felt guilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?
At full force, a cough propels thousands of microscopic drops of saliva and germs at speeds of up to 80km per hour! This is why it is important (and polite) to cover your mouth when you cough to prevent the spread of disease.

An occasional cough is normal, but one that persists could signal an underlying problem. Find out how to treat a cough at home and when it is time to seek help.

By Adam Koh

In consultation with Dr Pallavi Chaudhary, resident physician
Brought on by an annoying tickle in the throat or congestion in the chest, a cough is not a disease in itself, but a defensive response to an invader. A cough – an explosive expulsion of air from the lungs – is the body’s way of ridding itself of foreign substances and secretions in the lungs or respiratory tract so as to reduce irritation or prevent infection.

A cough is a reflex mechanism. When a foreign substance or mucus stimulates the sensory nerves of the respiratory system, an impulse is sent to the ‘cough centre’ in the brain. This triggers a message to the muscles in the respiratory system telling them to contract and force the irritant out of the body with a burst of air.

**Decoding coughs**
There are several types of coughs caused by different sources and infections.

**A stress cough** is a reflexive spasm of the airways due to stress. There is no mucus and it is not associated with infections.

**A dry cough** with no phlegm and scratchy or painful throat can be due to a viral infection, cold, dry air or dust or smoke. The brain interprets throat irritation as a foreign object and triggers a cough to expel the perceived ‘invader’.

A productive, chesty or wet cough is one that expels phlegm. Phlegm or mucus is a thick protective fluid produced by the tissues in the mouth, nose, throat, sinus and lungs to trap germs and keep tissues moist. The colour and consistency of phlegm indicates the severity of an infection. Typically, thick discoloured mucus is an indication of infection.

**Chronic chesty cough** with dark coloured or blood-stained phlegm may be a sign of bronchitis, bacterial pneumonia, tuberculosis, and in some cases, lung cancer.

**A barking cough** is usually seen in children and may be associated with croup or other viral infections.

**A ‘whooping’ cough** can indicate a serious infection and needs prompt evaluation by a doctor.

**Postnasal drip** is a cough triggered by excess mucus (from a cold or flu) running down the back of the throat.

According to Dr Pallavi Chaudhary, Resident Physician, JurongHealth, most coughs are caused by viral respiratory tract infections and resolve in a few days or within three weeks. A cough that lasts for more than eight weeks is considered chronic. "In adults, the most common causes of chronic cough include bronchitis, asthma, postnasal drip, sinus problems and acid reflux," she explained.

**HOME REMEDIES**

**Warm water with honey and lemon**
Honey lubricates the throat while lemon can help break up phlegm.

**Inhale steam**
Hold your head (covered with a towel if preferred) over a large bowl of steaming water. Add a few drops of eucalyptus essential oil to soothe the throat and help loosen phlegm.

**Stay hydrated**
Drinking plenty of plain water prevents dehydration and thins out congestion.
Put a lid on coughs
A cough is often a sign of an underlying condition so it is important to identify the source of the cough for more effective treatment. Over-the-counter medicines may be used to alleviate the discomfort associated with coughs. “These may be helpful in treating and soothing the symptoms of common cough – but only in cases when you are well otherwise and the cough is not associated with breathing problems, wheezing, weight loss, chest pain or blood-stained phlegm,” said Dr Pallavi.

Cough medicines take several forms, she explained. “Suppressants control or suppress the cough reflex and work best for a dry, hacking cough that keeps you awake. Expectorants help in thinning the mucus and clearing thick mucus from the airways and may be used for a productive cough.” For coughs that occur with cold symptoms such as body aches and nasal congestion, you may opt for over-the-counter cough medicines that combine suppressants, expectorants, antihistamines or decongestants. “This combination of medicines may give optimal relief for multiple symptoms. The downside is that you may be taking medication which you don’t need,” she highlighted. This means you should check the ingredients of cough medicines and speak to the pharmacist to be sure. This is even more important if you have any chronic diseases such as high blood pressure, diabetes and heart problems and are taking any prescription medicines. Do not take over-the-counter cough medicines for more than seven days.

Hack-proof
You can reduce your risk of cough with basic hygiene, frequent hand washing, and by not touching your mouth or eyes. An annual influenza vaccine is also useful to prevent seasonal flu. The elderly and those with chronic lung disease should also consider being vaccinated against pneumococcal disease. Lower the risk of chronic cough by not smoking and avoiding second-hand smoke. A healthy diet, regular exercise and sufficient water and sleep also go a long way towards a robust immune system to keep coughs and illness at bay.

Seek help for chronic coughs
If a cough lasts for over two weeks and shows no signs of getting better, see a doctor.

Seek medical attention if you:

* Have underlying chronic diseases such as heart problems, asthma or emphysema
* Are a smoker
* Are taking steroids or any medications which suppress the immune system
* Experience breathing problems such as wheezing or breathlessness
* Expel unusually large amounts of mucus or expel bloody or pink frothy mucus
* Have night sweats
* Experience chest pain
* Were recently hospitalised
hear for a sound life

Gaining the ability to hear means more than enhancing communication, but also maintaining relationships and quality of life. By Bella Lim

IN CONSULTATION WITH DR REBECCA HEYWOOD,
ASSOCIATE CONSULTANT, DEPARTMENT OF ENT (HEAD AND NECK SURGERY)
We may not always realise it, but the everyday sounds of life – a favourite song, the rustle of leaves or the giggle of a child – all play an important role in adding to the joy of life. When hearing loss happens, it can have a significant negative impact. “The impact of hearing loss is hugely underestimated because it is a disability that cannot be seen,” said Dr Rebecca Heywood, Associate Consultant, ENT (Head and Neck Surgery), JurongHealth. “For a majority of people, hearing loss happens very gradually so they do not notice that they are no longer able to hear everyday sounds.”

Untreated hearing loss has far-reaching consequences. Apart from affecting the ability to hear traffic, alarms or conversation, it can lead to social isolation, negatively affect relationships and cause loss of income, anxiety and even depression. “Even more worrying,” said Dr Heywood, “Untreated hearing loss has recently been linked to earlier and more rapid cognitive decline and is associated with dementia.”

Hearing loss occurs when there is a problem with any part of the ear’s receiving and transmitting system. It can be partial or complete and acquired at any stage in life.

**Conductive hearing loss** in the external or middle ear can be caused by ear wax, a hole in the ear drum, inflammation/infection or the stiffening of the middle ear bones.

**Sensorineural hearing loss** in the inner ear or hearing nerve may be due to the effects of ageing, exposure to loud noise, Meniere’s disease or some medications and infections.

**Mixed hearing loss** is the loss of hearing due to a combination of problems in the external, middle and inner ear.

Approximately 3 per cent of Singaporean adults between the ages of 18 and 69 have disabling hearing loss, while 1 in 2 aged above 65 have some degree of hearing loss, Dr Heywood pointed out. “This is a huge number of people who are missing out on important everyday experiences. Hearing aids could treat the majority of these cases as they are simple to use and the benefits are enormous.”
Modern implants are so sensitive that they can adapt automatically to the listening environment and even have wireless connectivity so you can stream sounds from a smartphone or TV directly to your implant.

Hear again
You don’t have to live with hearing loss. In early stage hearing loss, hearing aids can help people to hear better with their remaining natural hearing by amplifying sound. When hearing loss is more serious or when hearing is entirely impaired, a hearing or cochlear implant is a more effective option.

A cochlear implant is an electronic device that is surgically implanted. It replaces the hearing function of the damaged inner ear by turning sound into electrical impulses that are sent directly to the hearing nerve.

Cochlear implant surgery is very safe and takes about two hours, Dr Heywood reassured. Most patients can go home the next day. Cost need not be an issue either, she added. “Subsidies and extra financial assistance are available for implants in Singapore based on means-testing protocols.”

It is never ‘too late’ to get a cochlear implant, nor is age-related hearing loss just something to put up with, said Dr Heywood. “The oldest person I have seen get her cochlear implant when she was 94 years old! Why live the rest of your life unable to hear your husband or wife, grandchildren or friends, when you could be sharing these precious moments with your loved ones? Receiving a cochlear implant can be life-changing. After their implant, patients often tell me that they just didn’t realise how much they were missing out on!”

ANATOMY OF A BIONIC EAR

A Speech processor  B Transmitting coil  C Receiver-stimulator

The speech processor A is worn externally behind the ear like a typical hearing aid. This device is programmed to pick up sound elements useful for understanding speech. It sends audio signals to the transmitting coil B.

The coil sends the signals across the skin 1 to the receiver/stimulator C.

The receiver/stimulator converts the signals and stimulates the hearing nerve fibres in the cochlear 2 which sends the messages to the brain 3.

‘MADE TO ORDER’
A few weeks after surgery, the implant is switched on and the patient will start rehabilitation with an audiologist to fine-tune the device for his or her own unique hearing requirements. Though the sound is different from natural hearing, the brain adapts to it and over time, it becomes ‘normal’ for the patient.
Snoring may be a common nighttime nuisance, but it can also signal a serious sleep disorder called sleep apnoea.

By Adam Koh

IN CONSULTATION WITH DR ADELINE TAN, CONSULTANT, RESPIRATORY MEDICINE

Chronic severe snoring could be more than a nuisance for a spouse – but a sign of a dangerous sleep disorder called obstructive sleep apnoea (OSA). "Sleep apnoea or OSA affects a person’s breathing and interrupts sleep," explained Dr Adeline Tan, Consultant, Respiratory Medicine, JurongHealth. "People with sleep apnoea stop breathing repeatedly, sometimes hundreds of times, while they sleep.” This is because overly relaxed airway muscles collapse, causing a complete or partial blockage of the upper airway. This forces the diaphragm and chest muscles to work extra hard to reopen the airway, resulting in gasping or jerking as breathing resumes.

**The blockage of the airway does more than cause an abrasive snore – it disrupts oxygen flow, interrupts sleep and stresses vital organs.**

**Beware the snore**

Poor sleep quality affects job and/or school performance and increases the risk of workplace and road accidents.
OSA is also linked to many health problems, Dr Tan highlighted. "Untreated sleep apnoea can lead to hypertension, stroke, irregular heart rhythm, enlargement of the heart muscle, heart failure, diabetes, depression and even sudden death." OSA often goes undiagnosed because it is mistaken for ‘normal’ snoring. However, due to the many serious potential complications linked to OSA, it is important to see a doctor if you exhibit a number of these symptoms.

Daytime sleepiness or fatigue
Dry mouth or sore throat upon awakening
Frequent urination at night
Headaches upon waking
Trouble concentrating; forgetfulness or irritability
Night sweats
Restlessness at sleep
Sexual dysfunction
Snoring
Sudden awakening with gasping or choking

Treatment is determined and customised depending on these various root cause/s. OSA risk is higher in those who are overweight or in people with large tonsils or a small face and jaw. Drinking alcohol or taking sleeping pills can also make the airway more susceptible to collapsing during sleep. Apart from weight management, oral devices and surgery, OSA can be managed with a continuous positive airway pressure – a mask-like device that keeps the airway open while you sleep.

A JURONGHEALTH STUDY LED BY DR ADELINE TAN FOUND THAT:

1:3 SINGAPOREANS HAS MODERATE TO SEVERE SLEEP APNOEA
1:10 SINGAPOREANS SUFFERS FROM SEVERE SLEEP APNOEA

THOSE OF CHINESE AND MALAY ETHNICITY HAVE HIGHER RATES OF OSA

These results are interesting because although obesity is one of the risk factors for OSA, those of Chinese ethnicity have the lowest obesity rates among the three major ethnic groups but the highest prevalence of OSA. This study provides an update on OSA prevalence in Asians and will go towards improving and targeting public education and awareness, and diagnosis and treatment of OSA.
Fat may have a bad reputation, but it’s got a good side as well. In fact, fat is essential for many important bodily functions. It is a source of energy, protective cushion for organs and transport system for fat-soluble vitamins. The problem with fat is that we often eat much more than we should. Fat should take up no more than a third of our daily calorie intake and we should be mindful that the fat we do eat is of good quality.
According to Elisa Mak, Dietitian, JurongHealth, there are several types of fat in our diet. “Each has a different effect on health and can either promote wellness or increase our risk of disease,” she said, “The most common type of fat we are told to avoid is saturated fats. However, there is a less talked about fat called trans fat.” Trans fat (or trans fatty acids) is found in processed and convenience foods. This type of fat is extra dangerous because it doesn’t just increase bad cholesterol, but lowers good cholesterol as well.

Trans fat explained
There are two sources of trans fats. Small amounts can be found naturally in some meat and dairy. The second – and more significant source – is processed foods such as hard margarine, shortening and commercial deep-fried food and pastries. Ms Mak explained, “Trans fat is formed when vegetable oils undergo hydrogenation, an industrial process that adds hydrogen to solidify liquid oil so it becomes solid at room temperature.” This process makes fat more stable and less likely to spoil, giving foods made with it a longer shelf life. Foods fried in this fat are also more crisp.

However, its impact on health is far from positive. In fact, the World Health Organization found that trans fat consumption is a significant contributor to cardiovascular disease.

Track the trans fat
Given the dangers of trans fats, moves have been made to limit or ban trans fats around the world. In Singapore, no more than 2g of trans fat per 100g is allowed in fats and oils supplied to food establishments and manufacturers and in retailed fats and oils. Trans fat levels must also be indicated on food labels.

Even so, consumers should also educate themselves to spot ‘hidden’ bad fats in processed food, said Ms Mak. “Identify trans fat by looking for partially hydrogenated vegetable oil or shortening in the ingredients list.” Look out too for other types of ‘bad’ fat such as palm or vegetable oil, she added. Instead, opt for unhydrogenated oil such as olive, canola or peanut oil. Better yet, limit fat intake by avoiding deep fried foods and swap to roasted or grilled foods instead. It is also beneficial to include heart-healthy sources of fat (from walnuts or oily fish such as salmon, sardines or mackerel) two to three times a week into your meals.

In a healthy diet, 25 to 35 per cent of your total daily calories should come from good fat.
Dessert isn’t out of the question if you have diabetes. Learn how to keep your sweet tooth happy with these tips. By Louisa Foo

IN CONSULTATION WITH LEE LIN FONG, SENIOR DIETITIAN

the diabetic’s guide to dessert
Diabetes is not – as mistakenly perceived – caused by eating too much sugary food, but is a condition where the body can no longer ‘unlock’ the energy from carbohydrates (including sugar), causing dangerous spikes and dips in blood sugar. This means that when it comes to choosing what to eat, diabetics need to control not only their intake of sugar but carbohydrates in general. Carbohydrates refer to sugars, complex carbohydrates and fibre – all of which can be found in foods such as rice, bread, noodles, fruit and sweet foods. All these, not just sugar, count towards a diabetic’s carbohydrate quota for the day.

“Carbohydrates have the greatest impact on blood sugar levels, causing it to rise,” explained Lee Lin Fong, Senior Dietitian, JurongHealth. “In processed and packaged foods, carbohydrates may be labelled as starch, sugar, honey, sugar alcohol, polydextrose or maltodextrin,” she explained. Even foods that are labelled ‘sugar free’ or ‘diabetic friendly’ may still contain a substantial amount of other types of carbohydrates and have a significant impact on blood sugar level, she highlighted. “Thus, it is important to read the nutrition information panel and/or the ingredient list to make wiser choices.”

Balancing act
If you are diabetic, identifying and knowing just how much carbohydrates you are eating is important because it means you can better maintain a good carbohydrate balance – and even enjoy the occasional dessert. A ‘diabetic-friendly’ dessert, said Ms Lee, should be one that is relatively low in carbohydrates and calories. Ideally it should also be high in fibre. This includes frozen low-fat yoghurt with nuts, fresh fruit or even homemade low-sugar cookies. This means you don’t have to give up dessert altogether, but carefully tweak your diet so you can still enjoy a sweet finale.

Opt for brown instead of white rice, noodles or pasta and eat a little less than your usual serving. This means you can still ‘afford’ to have a small slice of cake after your meal without going beyond your ‘carb quota’.

Celebrating a special occasion with cake or ice cream? Halve your portion or share it with a friend.

Cut back on sugar by using low-calorie sweeteners, though keep in mind that – depending on the sweetener – these also contain some carbohydrates.

You can also curb sugar cravings by complying with your diabetes medication, eating regular balanced meals and getting regular exercise. Poor diabetes control causes saliva to turn sweet, dulling the ability to taste sweet foods and increasing sugar cravings. “Remember that sugar is not forbidden,” Ms Lee said, “Rather, focus on quantity, quality and frequency.”

KNOW YOUR SUGAR SUBSTITUTES

SUGAR ALCOHOL
sorbitol, xylitol, mannitol, glycerol, lactitol, erythritol, isomalt

ARTIFICIAL SWEETENERS
aspartame, sucralose, saccharin and acesulfame potassium

These can be used to sweeten drinks or in cooking. However, keep in mind that these do not help reduce sugar cravings and should be consumed in limited amounts.
Cut the fat but not the flavour with this healthy rendang dish made with lean chicken and yoghurt!

**Chicken and yoghurt rendang**

Preparation time: 45 minutes  
Serves 4

**Ingredients**

- 1 medium Skinless chicken breast, chopped into chunks
- 3 big Onions
- 5 cloves Garlic
- 5 Dried red chillies
- 4 Fresh red chilies
- ½ inch Ginger
- ½ inch Galangal (lengkuas)
- ½ inch Turmeric root
- 1 stalk Lemongrass bulb, crushed
- 3 tbsp Corn oil
- A pinch Low-sodium salt
- 30-50ml Water
- ½ tub Low-fat yoghurt
- 2 to 3 Kaffir lime leaves
- ½ cup Toasted shredded coconut (kerisik)

**Method**

1. Blend onions, garlic, dried red chilli, red chilli, ginger, galangal and turmeric root to a paste
2. Heat a pot or wok, add corn oil and cook the paste till fragrant
3. Add chicken breast and toss in the paste till the chicken is cooked
4. Add the water, yoghurt and lemongrass and simmer until the mixture is dry before adding salt to taste
5. Add the lime leaf and toasted shredded coconut and mix well
6. Serve with hot rice

**NUTRITION VALUE (PER SERVING)**

- Calories: 250 KCal
- Protein: 25G
- Fat: 18G
- Carbohydrates: 9G
- Fibre: 5G
Beat the HEAT!

The ongoing heatwave may do more than cause discomfort. Learn how you can avoid heat-related illnesses that can result from rapid loss of water.

Sweat cools the body and is the body’s natural response to high temperatures. According to Dr Soh Poh Choong, Principal Resident Physician, Emergency Medicine, JurongHealth, it is important to replace the water lost from sweat in a timely manner. “Rapid and prolonged loss of bodily fluids result in an electrolyte imbalance in the body that leads to heat injury,” she said. Heat illnesses can transition from mild heat cramps and heat exhaustion to life-threatening heatstroke. Prevent dehydration and other potential health issues with these tips.

Keep on sipping
Hydrate regularly throughout the day with small and frequent sips of water; don’t wait till you’re thirsty.

Ice, ice baby
Fill a plastic bottle halfway with water and freeze it on its side. Top it up with more water the next day for portable, ice-cold refreshment.

Exercise smart
Do your outdoor workouts in the morning or at night. Otherwise, clock your clicks at an indoor gym or swap pounding the pavement for a few laps in the pool.

Natural cooling
Water is your best friend in more ways than one. Keep cool naturally by wrapping a wet towel around your neck, placing a bowl of ice water in front of the fan or using a spray mister.

Brolly buddy
Shade yourself wherever possible. Opt for an umbrella with ultraviolet light protection for even more coverage.
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